Claims

What is claimed is:

1. A suspension product for reducing wetness under the arm which product comprises in % by weight based on the entire weight of the product:

(a) 0.01-20 weight % of a superabsorbent polymer selected from the group consisting of a polyacrylate homopolymer (sodium salt) and starch graft copolymers of poly(2-propenamide-co-2-propenioic acid) (sodium salt), with a water absorbing capacity of about 10-1000 g water/g superabsorber as measured in the absence of added salt;

(b) 0.05-2.0 weight % of a sesquiterpene material selected from the group consisting of: (i) a sesquiterpene alcohol; (ii) an essential oil containing at least 5% of a sesquiterpene alcohol; or (iii) a combination of (i) and (ii), provided that the level of sesquiterpene alcohol in the final product is at least 0.05% of the total formula;

(c) 0.05-10 weight % of a small particle size zinc oxide having a particle size range of 0.02-200 microns;

(d) 2-88 weight % of a volatile silicone having a flash point of 100 degrees C or less;

(e) 0-5 weight % of a surfactant with a hydrophilic/lipophilic balance in the range of 3-13;

(f) 0-5 weight % of an antiperspirant active;

(g) 0-20 weight % of a nonvolatile silicone having a flash point greater than 100 degrees C; and

(h) 0-20 weight % of an emollient;

(i) 0-5 weight % of a fragrance; and

(j) 0-5 weight % of an encapsulated fragrance;

provided that:

(A) if the product is stick or soft solid, the product further comprises a gelling agent selected from the group consisting of 5-30 weight % stearyl alcohol; 0.1-10 weight % (on an actives basis) silicone elastomer; 0.1-20 weight % waxes; 1-3 weight %

siliconized polyamides; 1-20 weight % low molecular weight polyethylene having a molecular weight in the range of 400-1000; and combinations of the foregoing;

(B) if the product is an aerosol, the product further comprises 30-90 weight % of a propellant selected from the group consisting of (i) a hydrocarbon, (ii) dimethyl ether, (iii) a hydrofluorocarbon and (iv) mixtures of one or more of (i)-(iii);

(C) if the product is a roll-on or pump spray, the product further comprises 1-15% of a suspending agent selected from the group consisting of:

(i) colloidal silica with a particle size in the range of 2-100 microns;

(ii) clays selected from the group consisting of montmorillonite clays and hydrophobically treated montmorillonite clays, where the clays have a particle size in the range of 50-10,000 nanometers;

(iii) magnesium aluminum silicates with a particle size in the range of 0.1-50 microns; and

(iv) mixtures of any of (i)-(iii).

2. A product as claimed in Claim 1 comprising 0.1-10 % of the superabsorbent polymer.

3. A product as claimed in Claim 1 comprising 0.1-1.5 % of a sesquiterpene containing material.

4. A product as claimed in Claim 1 or 3 wherein the sesquiterpene material is a sesquiterpene alcohol selected from the group consisting of:

(i) a cyclic sesquiterpene alcohol selected from the group consisting of:

8-α-acetoxyelemol,

β-acoradienol,

α-acorenol,

β-acorenol,

cis-artenuic alcohol,

β-biotol,

α-bisabolol,

β-bisabolol,

bicyclovitivenol,

β-bisabolenol,

bulensol,

α-cadinol,

epi-α-cadinol,

carotol,

caryophyllene alcohol,

14-hydroxy-9-epi-e-caryophyllene,

5-neo-cedranol,

8-cedren-13-ol,

cedr-8(15)en-9-α-ol,

cedrol,

epi-cedrol,

β-copaen-4-α-ol,

cryptomeridiol,

cubebol,

cubenol,

1-epi-cubenol,

1,10-di-epi-cubenol,

cycloisolongifol-5-ol, dihydrocadinol (1,6-dimethyl-4-iso-propyl-decahydronapthylene) drimenol,

elemol,

epi-globulol,

α-eudesmol,

β-eudesmol,

γ-eudesmol,

7-epi-α-eudesmol,

10-epi-γ-eudesmol,

dihydro-eudesmol,

germacrene D-4-ol,

gleenol,
guaiol,
globulol,
gossonorol,
hexahydrofarnesol (2,6,10-trimethyldodecanol), himachalol,
hinesol,
14-hydroxy-α-humulene,
14-hydroxy-α-muurolene,
5-isocedranol,
isolongifolan-7-α-ol, isolongifolol, khusinol,
ledol,
z-lancetol,
longiborneo,
longifolol,
longipinanol,
cis-muurol-5-en-4-β-ol, cis-muurol-5-en-4-α-ol, α-muurolol,
epi-α-muurenol,
occidentalol,
trans-dihydro-occidentalol, occidol,
e-nuciferol,
patchouli alcohol,
e-β-santalol,
z-α-santalol,
z-β-santalol,
β-santalol,
cis-sesquisabinene hydrate,
trans-sesquisabinene hydrate,
z-sesquilavandulol,
selin-11-en-4-α-ol,
spirosantalol spathulenol,

thujopsan-2-α-ol,

thujopsan-2-β-ol,

turmenol,

valerianol,

viridiflorol,

vitiverol widdrol,

bicyclo-vetiverol, and

tricyclovetiverol; and

(ii) an acyclic sesquiterpene alcohol selected from the group consisting of:

dihydrofarnesol, z,z-farnesol,.

e,e-farnesol,

e,z-farnesol,

e-nerolidol,

z-nerolidol,

e-sesquilavandulol,

and tetrahydrofarnesol; and

(iii) a member of the group consisting of sesquiterpene alcohols that have an anti-inflammatory effect as indicated by the ability either in-vitro in a cell culture assay or in-vivo to (A) inhibit prostaglandin cyclooxygenase-I (COX-1), prostaglandin cyclooxygenase-II (COX-II) in-vitro or in-vivo; or (B) the ability to inhibit phospholipase activity, interlukin-1β (Il-1β) or interlukin-4 (Il-4).

5. A product as claimed in Claim 1 wherein the sesquiterpene material is member of the group consisting of: dihydrofarnesol, z,z-farnesol, e,e-farnesol, e,z-farnesol, e-nerolidol, z-nerolidol, e-sesquilavandulol, and tetrahydrofarnesol.

6. A product as claimed in Claim 1 wherein the sesquiterpene material is an essential oil.

7. A product as claimed in Claim 6 wherein the essential oil is selected from the group consisting of: Patchouli wood oil, Sandalwood oil, Grapefruit oil, Lemongrass oil, Cedarwood oil, and Guiac wood oil.

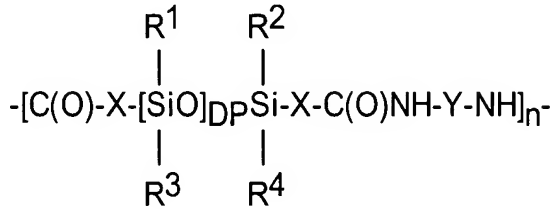
8. A product as claimed in Claim 1 comprising 0.1-5% of the small particle zinc oxide.

9. A product as claimed in Claim 1 wherein the volatile silicone is a member of the group consisting of hexamethyl disiloxane, D4 cyclomethicone, D5 cyclomethicone, D6 cyclomethicone, and mixtures of any of the foregoing.

10. A product as claimed in Claim 1 comprising 3-13 weight % of the surfactant.

11. A product as claimed in Claim 1 further comprising a gelling agent selected from the group consisting of 5-30 weight % stearyl alcohol; 0.1-10 weight % (on an actives basis) silicone elastomer; 0.1-20 weight % waxes; and 0.1-20 weight % low molecular weight polyethylene having a molecular weight in the range of 400-1000.

12. A product as claimed in Claim 1 further comprising 1-3% of a gelling agent selected from the group consisting of a siliconized polyamide of Formula IIIA:



Formula IIIA

where:

(1) degree of polymerization is a number in the range of 10-40;

(2) n is a number selected from the group consisting of 1-500;

(3) X is a linear or branched chain alkylene having 1-30 carbons;

(4) Y is selected from the group consisting of linear and branched chain alkylenes having 1-40 carbons, wherein:

(A) the alkylene group may optionally and additionally contain in the alkylene portion at least one of the members of a group consisting of (i) 1-3 amide linkages; (ii) C5 or C6 cycloalkane (as a cycloalkylene linkage); and (iii) phenylene optionally substituted by 1-3 members selected independently from the group consisting of C1-C3 alkyls; and

(B) the alkylene group itself may optionally be substituted by at least one member selected from the group consisting of (i) hydroxy; (ii) C3-C8 cycloalkyl; (iii) 1-3 members selected independently from the group consisting of C1-C3 alkyls; phenyl optionally substituted by 1-3 members selected independently from the group consisting of C1-C3 alkyls; (iv) C1 - C3 alkyl hydroxy; and (v) C1 - C6 alkyl amine; or Y $= Z^2$ where

$$Z^2 = R^{20}\text{-}T\text{-}R^{21}\text{-}\underset{\displaystyle R^{22}}{|}$$

wherein each of R^{20}, R^{21} and R^{22} are independently selected from the group consisting of linear and branched C1-C10 alkylenes; and T is selected from the group consisting of (i) a trivalent atom selected from N, P and Al; and (ii) -CR, where R is selected from the group consisting of hydrogen, methyl, ethyl, propyl, isopropyl, a siloxane chain, and phenyl, wherein the phenyl may optionally be substituted by 1-3 members from the group consisting of methyl and ethyl; and

(5) each of R^1 - R^4 is independently selected from the group consisting of methyl, ethyl, propyl, isopropyl, a siloxane chain, and phenyl, wherein the phenyl may optionally be substituted by 1-3 members from the group consisting of methyl and ethyl;

wherein the polyamide of Formula IIIA has:

(i) a silicone portion in the acid side of the polyamide;

(ii) a degree of polymerization in the range of 10-40;

(iii) an average molecular weight of at least 50,000 daltons with at least 95% of the polyamide having a molecular weight greater than 10,000 daltons; and

(iv) a polydispersity of less than 20.

13. A product as claimed in Claim 1 further comprising 0.05-50 weight % of a silicone copolyol which is 10% in cyclomethicone, or its equivalent.

14. A product as claimed in Claim 1 further comprising further comprising 1-3 weight % of an aluminum or aluminum/zirconium antiperspirant salt.

15. A product as claimed in Claim 1 further comprising particularly 5-10% of a nonvolatile silicone having a flash point greater than 100 degrees C.

16. A product as claimed in Claim 1 further comprising 2-12 % of an emollient.

17. A product as claimed in Claim 16 wherein the emollient is selected from the group consisting of C12-15 alkyl benzoate, PEG-8 distearate, PPG-3-myristyl ether, and polyisobutene 250.

18. A product as claimed in any one of Claims 1-17 which is free of one or more of surfactant, antiperspirant active, non-volatile silicone, fragrance and microencapsulated fragrance.

19. A product as claimed in any one of Claims 1-17 which is free of antiperspirant actives selected from the group consisting of aluminum and aluminum/zirconium salts.

20. A product as claimed in Claim 1 wherein the product is a stick and comprises:
(a) 8-25 weight % of the superabsorbent polymer;
(b) 0.05-10 weight % of the sesquiterpene material;
(c) 0.05-10 weight % of the small particle size zinc oxide;
(d) 10-25 weight % of the gellant;
(e) 40-70 weight % of the volatile silicone;
(f) 0-15 weight % of a non-volatile silicone which is a dimethicone having a viscosity in the range of 6-1000 centistokes;

(g) 2-10 weight % of an emollient selected from the group consisting of polyisobutene, and C12-15 alkyl benzoates;
(h) 0-5 weight % fragrance;
(i) 0-5 weight % of a microencapsulated fragrance;
(j) 0-10 weight % of a surfactant; and
(k) less than 2 weight % water.

21. A product as claimed in Claim 1 wherein the product is a soft solid and comprises:
(a) 70-99.94 weight % of the silicone elastomer;
(b) 0.01-30 weight % of the superabsorbent;
(c) 0.05-10 weight % of the sesquiterpene material;
(d) 0.05-10 weight % of the small particle size zinc oxide;
(e) 0-5 weight % of a fragrance;
(f) 0-5 weight % of a microencapsulated fragrance; and
(g) less than 2 weight % water.

22. A product as claimed in Claim 1 wherein the product is a roll-on or pump spray and comprises:
(a) 0-80 weight % of the volatile silicone;
(b) 0-50 weight % of the silicone elastomer;
(c) 0-80 weight % of the non-volatile silicone which is a dimethicone having a viscosity in the range of 6-1000 centistokes;
(d) 0.01-30 weight % of the superabsorbent;
(e) 0.05-10 weight % of the sesquiterpene material;
(f) 0.05-10 weight % of the small particle size zinc oxide;
(g) 0-5 weight % fragrance;
(h) 0-5 weight % of a microencapsulated fragrance;
(i) 1-10% of a suspending agent; and
(j) less than 2 weight % water.

23. A product as claimed in Claim 1 wherein the product is an aerosol and comprises:

(a) 30-80 weight % of the volatile silicone;

(b) 30-90% of an aerosol propellant;

(c) 0.01-30 weight % of the superabsorbent;

(d) 0.05-10 weight % of the sesquiterpene material;

(e) 0.05-10 weight % of the small particle size zinc oxide;

(f) 0-5 weight % fragrance;

(g) 0-5 weight % of a microencapsulated fragrance;

(h) 1-10% of a suspending agent; and

(i) less than 2 weight % water.